pp4

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/385,938	08/30/1999	ANDREW G. BEVAN	476-1843	9822

7590 09/15/2003

Barnes & thornburg
P O BOX 2786
CHICAGO, IL 60690-2786

EXAMINER	
DINH, DUNG C	
ART UNIT	**PAPER NUMBER**
2153	11

DATE MAILED: 09/15/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

UNITED STATES PATENT AND TRADEMARK OFFICE

Commissioner for Patents
United States Patent and Trademark Office
P.O. Box 1450
Alexandria, VA 22313-1450
www.uspto.gov

MAILED

SEP 1 5 2003

Technology Center 2100

**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Paper No. 11

Application Number: 09/385,938
Filing Date: August 30, 1999
Appellant(s): BEVAN ET AL.

William M. Lee, Jr.
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 7/31/2003.

(1) Real Party in Interest

A statement identifying the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

A statement identifying the related appeals and interferences which will directly affect or be directly affected by or have a bearing on the decision in the pending appeal is contained in the brief.

(3) Status of Claims

The statement of the status of the claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Invention

The summary of invention contained in the brief is correct.

(6) Issues

The appellant's statement of the issues in the brief is correct.

(7) Grouping of Claims

Appellant's brief includes a statement that claims 1,5,7 and 13; 2; 6,11, and 12; 8-10 do not stand or fall together and provides reasons as set forth in 37 CFR 1.192(c)(7) and (c)(8).

(8) Claims Appealed

The copy of the appealed claims contained in the Appendix to the brief is correct.

(9) Prior Art of Record

6,081,550	Wolf	6-2000
6,330,601	French et al.	12-2001
6,400,702	Meier	6-2002

(10) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claims 1-2, 5, 7, and 13 are rejected under 35 U.S.C. 102(e) as being anticipated by Wolf (US 6,081,550).

As set forth in claim 1, Wolf discloses in a communication network (SDH, SONET) comprising a plurality of network elements (fig. 1a-1d (NE1-NE8)), a method of providing management data describing synchronization trail information for the network elements, the method comprising the steps of:

obtaining network element synchronization data (clock paths and clock path test results - see col.2 lines 61-65, col.3 lines 1-12);

obtaining network element connectivity data (network connections of fig. 1a-1d, see col.3 lines 24-38); and

computing synchronization trail information for said network elements from said synchronization data and said connectivity data (the process of tracing and determining whether the clock paths are operative - see col.4 lines 30-48).

As set forth in claim 2, Wolf discloses a data representing a physical resource operating in accordance with protocol having plurality of layers comprising a timing layer representing synchronization trail information (inherent due to the existence of synchronization information: e.g. information representing the clock paths, and information from clock path tests, etc. It is inherent that the information is stored in some type of data representation).

As set forth in claim 5, Wolf discloses a method of exploring synchronization trails (clock paths) within a network (SDH) comprising a plurality of network elements (fig. 1a-1d (NE1-NE8)), the method comprising the steps of:

obtaining network element synchronization data (clock paths and clock path test results - see col.2 lines 61-65, col.3 lines 1-12);

obtaining network element connectivity data (network connections of fig. 1a-1d, see col.3 lines 24-38); and

computing synchronization trail information for a network element and the trail to the synchronization source of the

element, using the synchronization data and said connectivity data (the process of tracing back from the end element back to the source and determining whether the clock paths are operative - see col.4 lines 30-48).

As set forth in claim 7, Wolf discloses selecting a network element (the last element - NE number eight) as the start of a synchronization trail; and follow the synchronization trail to the synchronization source of the network element (see col.4 lines 30-48).

As set forth in claim 13, Wolf discloses a system for providing management data describing synchronization trails for network elements (clock paths) in a communication network (SDH) comprising a plurality of network elements (fig. 1a-1d (NE1-NE8)), the method comprising the steps of:

means for obtaining network element synchronization data (clock paths and clock path test results - see col.2 lines 61-65, col.3 lines 1-12);

means for obtaining network element connectivity data (network connections of fig. 1a-1d, see col.3 lines 24 38), and

means for computing synchronization trail information for a network element and the trail to the synchronization source of the element, using the synchronization data and said connectivity data (the process of tracing back from the end

element back to the source and determining whether the clock paths are operative - see col.4 lines 30-48).

Claims 6, 11 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wolf (US 6,081,550) in view of French et al. (US 6,330,601).

As set forth in claim 6, Wolf discloses a method of relating to synchronization trails (clock paths) within a network (SDH) comprising a plurality of network elements (fig. 1a-1d (NE1-NE8)), the method comprising:

obtaining network element synchronization data (clock paths and clock path test results - see col.2 lines 61-65, col.3 lines 1-12);

obtaining network element connectivity data (network connections of fig. 1a-1d, see col.3 lines 24-38);

computing synchronization trail information for said network elements from said synchronization data and said connectivity data (the test process of tracing and determining whether the clock paths are operative - see col.4 lines 30-48).

Wolf does not disclose representing the test information (synchronization trail) in graphical form. French discloses information from test in graphical form. French discloses providing a GUI for representing the network information. It

would have been obvious for one of ordinary skill in the art at the time of the invention was made to apply the graphical represent the network information as taught by French to the system of Wolf. The rationale is as follow: It would have been useful to display information representing the network in graphical form. As French teaches the desirability of displaying network information in graphical form for management purposes, one of ordinary skill in the art would have been motivated by French's teaching to have provided the system of Wolf with the means for displaying the synchronization trail in graphical form thereby having provided improved means for interacting with and managing the network.

As set forth in claims 11 and 12, official notice is taken to labeling the respective network elements based on prior conditions, i.e. labeling elements as "OK", "ISLAND", or "LOOP". Labeling aspects of old and notorious in the art. Wolf discloses detecting if a clock path is ok (col.3 lines 50-55), detecting if there is a loop in a clock path (col.5 lines 3-4), detecting 'island' of network elements (e.g. the groups of network elements NE1-NE8, etc.) Hence, it would have been obvious have been obvious to one of ordinary skill in the art to have labeled elements in the system of Wolf as modified because

it would have enabled visual reference of the status of the network elements.

Claims 8-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wolf (US 6,081,550) in view of Meier (US 6,400,702).

As set forth in claims 8, Wolf does not explicitly disclose starting the synchronization trail at a "leafNode". It is implied in Wolf to start at the last element and follow the synchronization trail to the source (see col. 4 lines 30-48, specifically lines 37-42). A leafNode is the last or bottom most node on a tree; hence, Wolf implicitly teaches starting the synchronization trail at the leafNode as claimed.

Meier discloses a method wherein computing trail information (data pathways through the communication system - col.5 line 65 to col. 6 line 5) comprises the steps of preferentially selecting a leafNode network elements as a start; see col.6 lines 35-54 - the leafNode (unattached bridge) listens and traces the route to the root (counts the hop to the root) to determine which node of the tree to attached to. It would have been obvious for one of ordinary skill in the art at the time of the invention was made to have provided the synchronization network of Wolf with preferences and counting mechanisms, as taught by Meier. The rationale is as follows: it would have

been obvious to have utilized known network elements and structures to optimize the trail. As Meier teaches the desirability of using leafNodes and counting hops to optimize the network trail, one of ordinary skill in the art would have been motivated to incorporate Meier's teaching to the system of Wolf.

As set forth in claim 9, it is rejected under similar rationale as for claim 8 above. It is implicit that the network elements are tagged and kept track of when the trail is being traced in order to keep track of which network elements have been tested. The tags are discarded as the start of a subsequent synchronization trail is implicit in the process of tracing a new or another the clock path in Wolf. It would have been obvious for one of ordinary skill in the art to tags the network elements as the test is progressed because it would have enable one to keep track of which network elements a long the clock path have been tested.

As set forth in claim 10, Wolf does not disclose the step of counting number of hops from a network element at the start of the synchronization trail to a primary reference clock. However, the count is implicit in Wolf by the facts that Wolf knew the number of network elements in a clock path, the connection sequences of the network elements, the network

element that is connected to a primary reference clock, and the last network element in the clock path. It is inherent that a count is kept at the start of the tracing of the clock path (as disclosed in col.4 lines 30-48) in order to keep track of which network element up the clock path to test next.

Meier discloses a method according wherein computing trail information comprising the step of counting the number of hops from a network element at the start of the trail to a primary reference; see col.6 lines 35-54 - the leafNode (unattached bridge) listens and traces the route to the root (counts the hop to the root) to determine which node of the tree to attached to. As Meier teaches the desirability of using leafNodes and counting hops to optimize the network trail, one of ordinary skill in the art would have been motivated to incorporate Meier's teaching to the system of Wolf.

(11) Response to Argument

Wolf generally relates to a Synchronous Digital Hierarchy communication network (SDH). Wolf in discussion of this system discloses how a clock is passed through the system and utilized to test integrity of the clock path (i.e. synchronization trail); see col.3 lines 11-23 (these lines set forth the general concept of Wolf's disclosure). The further cited sections

indicated how phase modulation is used to determine if an intact clock path exits. This determination provides "synchronization trail information" (i.e. the clock path and information about that path). Further, the limitation of "computing synchronization trail information" is clearly met by the testing of the integrity of the clock path when the reference clock is passed through the network elements NE1, ..., NE8 and the trace of the clock path between each of those network elements as disclosed on col.3 lines 24-48 and col.4 lines 30-48. The tests demonstrate the connectivity of the network elements (i.e. synchronization trails). In Wolf, the computing is done through the analysis of the data from the tests. The information computed is the integrity of the clock path (i.e. connectivity, loops and defects - see col.4 lines 49 to col.5 line 15).

With respect to claim 2, Applicant argues that Wolf does not "teach the existence of synchronization information inherent in the network and so no timing layer for representing synchronization trail information can be implied." The Examiner disagrees noting that Wolf operates in a Synchronous Digital Hierarchy requires synchronization for the network to function. Hence, Wolf inherently has timing layer information for synchronization of the network.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

Dung Dinh
Primary Examiner
Art Unit 2153

September 10, 2003

Conferees

MEHMET B. GECKIL
PRIMARY EXAMINER

LE HIEN LUU
PRIMARY EXAMINER

Barnes & thornburg
P O BOX 2786
CHICAGO, IL 60690-2786